WHAT IS CLAIMED IS:

1. A method for manufacturing an integrated circuit comprising the steps of:

forming an insulating film on one surface of a single-crystal semiconductor substrate;

patterning said insulating film, thereby selectively forming a mask;

converting a portion of said single-crystal semiconductor substrate into at least one porous layer by using an anodizing treatment;

removing said mask;

forming a first silicon oxide layer on said one surface;

polishing a surface of said first silicon oxide layer;

adding hydrogen into said single-crystal semiconductor substrate and said porous layer through said first silicon oxide layer, thereby forming a hydrogen-added layer;

adhering together said single-crystal semiconductor substrate and a supporting substrate provided with a second silicon oxide layer thereon;

performing a first heat treatment, thereby separating said single-crystal semiconductor substrate and said porous layer along said hydrogen-added layer;

performing a second heat treatment of said supporting substrate at 900-1200°C; and

removing said porous layer present over said supporting substrate.

2. A method for manufacturing an integrated circuit according to claim 1, wherein said surface is polished by chemical mechanical polishing.

3. A method for manufacturing an integrated circuit according to claim 1, wherein the step of forming said mask is designed to form in a region which becomes afterward an active region of a thin film transistor.

4. A method for manufacturing an integrated circuit according to claim 1, wherein said supporting substrate is selected from the group consisting of a semiconductor substrate, a quartz substrate, a ceramic substrate, a metal substrate, and a stainless steel substrate.

5. A method for manufacturing an integrated circuit according to claim 1, wherein said integrated circuit is an electroluminenscence display unit.

6. A method for manufacturing an integrated circuit according to claim 1, wherein said

integrated circuit is a display unit incorporated in one selected from a personal computer, a video camera, a mobile computer, a digital camera, a player for a recording medium, a goggle type display, a front type projector and a rear type projector.

7. A method for manufacturing an integrated circuit comprising the steps of:

forming an insulating film on one surface of a single-crystal semiconductor substrate;

patterning said insulating film, thereby selectively forming a mask;

converting a portion of said single-crystal semiconductor substrate into at least one porous layer by using an anodizing treatment;

removing said mask;

forming a first silicon oxide layer on said one surface;

polishing a surface of said first silicon oxide layer;

adding hydrogen into said single-crystal semiconductor substrate and said porous layer through said first silicon oxide layer, thereby forming a hydrogen-added layer;

adhering together said single-crystal semiconductor substrate and a supporting substrate provided with a second silicon oxide layer thereon;

performing a first heat treatment, thereby separating said single-crystal semiconductor substrate and said porous layer along said hydrogen-added layer;

performing a second heat treatment of said supporting substrate at 900-1200°C; removing said porous layer present over said supporting substrate, thereby forming at least one island-like semiconductor layer over said supporting substrate;

forming a gate electrode over said island-like semiconductor layer; and

introducing a p-type or an n-type impurity into said island-like semiconductor layer to form at least a source region, a drain region and a channel region.

8. A method for manufacturing an integrated circuit according to claim 7, wherein said surface is polished by chemical mechanical polishing.

9. A method for manufacturing an integrated circuit according to claim 7, wherein the step of forming said mask is designed to form in a region which becomes afterward said island-like semiconductor layer constituting a thin film transistor.

10. A method for manufacturing an integrated circuit according to claim 7, wherein said supporting substrate is selected from the group consisting of a semiconductor substrate, a quartz substrate, a ceramic substrate, a metal substrate, and a stainless steel substrate.

11. A method for manufacturing an integrated circuit according to claim 7, wherein said integrated circuit is a display unit incorporated in one selected from a personal computer, a video camera, a mobile computer, a digital camera, a player for a recording medium, a goggle type display, a front type projector and a rear type projector.

12. A method for manufacturing an integrated circuit comprising the steps of:

forming an insulating film on one surface of a single-crystal semiconductor substrate;

patterning said insulating film, thereby selectively forming a mask;

converting a portion of said single-crystal semiconductor substrate into at least one porous layer by using an anodizing treatment;

removing said mask;

forming a first silicon oxide layer on said one surface;

polishing a surface of said first silicon oxide layer;

adding hydrogen into said single-crystal semiconductor substrate and said porous layer through said first silicon oxide layer, thereby forming a hydrogen-added layer;

adhering together said single-crystal semiconductor substrate and a supporting substrate provided with a second silicon oxide layer thereon;

performing a first heat treatment, thereby separating said single-crystal semiconductor substrate and said porous layer along said hydrogen-added layer;

performing a second heat treatment of said supporting substrate at 900-1200°C;

removing said porous present over said supporting substrate, thereby forming at least one island-like semiconductor layer over said supporting substrate;

forming a gate electrode over said island-like semiconductor layer;

introducing a p-type or an n-type impurity into said island-like semiconductor layer to form at least a source region, a drain region, a lightly doped drain region and a channel region;

forming an interlayer insulating film to cover said gate electrode and said island-like semiconductor layer;

forming a source wiring and a drain wiring in contact with said source region and said drain region, respectively.

13. A method for manufacturing an integrated circuit according to claim 12, wherein said surface is polished by chemical mechanical polishing.

14. A method for manufacturing an integrated circuit according to claim 12, wherein the

step of forming said mask is designed to form in a region which becomes afterward said island-like semiconductor layer constituting a thin film transistor.

15. A method for manufacturing an integrated circuit according to claim 12, wherein said supporting substrate is selected from the group consisting of a semiconductor substrate, a quartz substrate, a ceramic substrate, a metal substrate, and a stainless steel substrate.

16. A method for manufacturing an integrated circuit according to claim 12, wherein said integrated circuit is a display unit incorporated in one selected from a personal computer, a video camera, a mobile computer, a digital camera, a player for a recording medium, a goggle type display, a front type projector and a rear type projector.

17. A method for manufacturing an integrated circuit comprising the steps of:

forming a mask on one surface of a single-crystal semiconductor substrate;

converting a portion of said one surface into at least one porous layer by using an anodizing treatment, wherein said mask is not formed on said portion;

removing said mask;

forming a first silicon oxide layer on said one surface; polishing a surface of said first silicon oxide layer;

adding hydrogen into said single-crystal semiconductor substrate through said first silicon oxide layer, thereby forming a hydrogen-added layer;

adhering together said single-crystal semiconductor substrate and a supporting substrate provided with a second silicon oxide layer thereon;

performing a first heat treatment, thereby separating said single-crystal semiconductor substrate along said hydrogen-added layer;

performing a second heat treatment of said supporting substrate at 900-1200°C; and

removing said porous layer present over said supporting substrate.

18. A method for manufacturing an integrated circuit according to claim 17, wherein the step of forming said first silicon oxide layer is followed by a step of flattening said first silicon oxide layer.

19. A method for manufacturing an integrated circuit according to claim 17, wherein the step of forming said mask is designed to form in a region which becomes afterward an active region of a thin film transistor.

20. A method for manufacturing an integrated circuit according to claim 17, wherein said supporting substrate is selected from the group consisting of a semiconductor substrate, a quartz substrate, a ceramic substrate, a metal substrate, and a stainless steel substrate.

21. A method for manufacturing an integrated circuit according to claim 17, wherein said integrated circuit is a display unit incorporated in one selected from a personal computer, a video camera, a mobile computer, a digital camera, a player for a recording medium, a goggle type display, a front type projector and a rear type projector.

22. A method for manufacturing an integrated circuit comprising the steps of:

forming an insulating film on one surface of a single-crystal semiconductor substrate;

patterning said insulating film, thereby selectively forming a mask;

converting a portion of said single-crystal semiconductor substrate into at least one porous layer by using an anodizing treatment;

removing said mask;

forming a first silicon oxide layer on said one surface;

adding hydrogen into said single-crystal semiconductor substrate and said porous layer through said first silicon oxide layer, thereby forming a hydrogen-added layer;

adhering together said single-crystal semiconductor substrate and a supporting substrate provided with a second silicon oxide layer thereon;

performing a first heat treatment, thereby separating said single-crystal semiconductor substrate and said porous layer along said hydrogen-added layer;

performing a second heat treatment of said supporting substrate at 900-1200°C; and

removing said porous layer present over said supporting substrate.

23. A method for manufacturing an integrated circuit according to claim 22, wherein said surface is polished by chemical mechanical polishing.

24. A method for manufacturing an integrated circuit according to claim 22, wherein the step of forming said mask is designed to form in a region which becomes afterward an active region of a thin film transistor.

25. A method for manufacturing an integrated circuit according to claim 22, wherein said supporting substrate is selected from the group consisting of a semiconductor substrate, a

quartz substrate, a ceramic substrate, a metal substrate, and a stainless steel substrate.

26. A method for manufacturing an integrated circuit comprising the steps of:

forming an insulating film on one surface of a single-crystal semiconductor substrate;

patterning said insulating film, thereby selectively forming a mask;

converting a portion of said single-crystal semiconductor substrate into at least one porous layer by using an anodizing treatment;

removing said mask;

forming a first silicon oxide layer on said one surface;

adding hydrogen into said single-crystal semiconductor substrate and said porous layer through said first silicon oxide layer, thereby forming a hydrogen-added layer;

adhering together said single-crystal semiconductor substrate and a supporting substrate provided with a second silicon oxide layer thereon;

performing a first heat treatment, thereby separating said single-crystal semiconductor substrate and said porous layer along said hydrogen-added layer;

performing a second heat treatment of said supporting substrate at 900-1200°C; and

removing said porous layer present over said supporting substrate.

27. A method for manufacturing an integrated circuit according to claim 26, wherein said surface is polished by chemical mechanical polishing.

28. A method for manufacturing an integrated circuit according to claim 26, wherein the step of forming said mask is designed to form in a region which becomes afterward an active region of a thin film transistor.

29. A method for manufacturing an integrated circuit according to claim 26, wherein said supporting substrate is selected from the group consisting of a semiconductor substrate, a quartz substrate, a ceramic substrate, a metal substrate, and a stainless steel substrate.

30. A method for manufacturing an integrated circuit comprising the steps of:

forming an insulating film on one surface of a single-crystal semiconductor substrate;

patterning said insulating film, thereby selectively forming a mask;

converting a portion of said single-crystal semiconductor substrate into at least one porous layer by using an anodizing treatment;

removing said mask;

forming a first silicon oxide layer on said one surface;

polishing a surface of said first silicon oxide layer;

adding hydrogen into said single-crystal semiconductor substrate and said porous layer through said first silicon oxide layer, thereby forming a hydrogen-added layer;

adhering together said single-crystal semiconductor substrate and a supporting substrate provided with a second silicon oxide layer thereon;

performing a first heat treatment, thereby separating said single-crystal semiconductor substrate and said porous layer along said hydrogen-added layer; and

removing said porous layer present over said supporting substrate.

31. A method for manufacturing an integrated circuit comprising the steps of:

forming an insulating film on one surface of a single-crystal semiconductor substrate;

patterning said insulating film, thereby selectively forming a mask;

converting a portion of said single-crystal semiconductor substrate into at least one porous layer by using an anodizing treatment;

removing said mask;

forming a first silicon oxide layer on said one surface;

polishing a surface of said first silicon oxide layer;

adding hydrogen into said single-crystal semiconductor substrate and said porous layer through said first silicon oxide layer, thereby forming a hydrogen-added layer;

adhering together said single-crystal semiconductor substrate and a supporting substrate provided with a second silicon oxide layer thereon;

performing a first heat treatment, thereby separating said single-crystal semiconductor substrate and said porous layer along said hydrogen-added layer;

removing said porous layer present over said supporting substrate, thereby forming at least one island-like semiconductor layer over said supporting substrate;

forming a gate electrode over said island-like semiconductor layer; and

introducing a p-type or an n-type impurity into said island-like semiconductor layer to form at least a source region, a drain region and a channel region.

32. A method for manufacturing an integrated circuit according to claim 30, wherein said surface is polished by chemical mechanical polishing.

33. A method for manufacturing an integrated circuit according to claim 31, wherein said surface is polished by chemical mechanical polishing.

34. A method for manufacturing an integrated circuit according to claim 30, wherein the step of forming said mask is designed to form in a region which becomes afterward an active region of a thin film transistor.

35. A method for manufacturing an integrated circuit according to claim 31, wherein the step of forming said mask is designed to form in a region which becomes afterward said island-like semiconductor layer constituting a thin film transistor.

36. A method for manufacturing an integrated circuit according to claim 30, wherein said supporting substrate is selected from the group consisting of a semiconductor substrate, a quartz substrate, a ceramic substrate, a metal substrate, and a stainless steel substrate.

37. A method for manufacturing an integrated circuit according to claim 31, wherein said supporting substrate is selected from the group consisting of a semiconductor substrate, a quartz substrate, a ceramic substrate, a metal substrate, and a stainless steel substrate.

38. A method for manufacturing an integrated circuit according to claim 30, wherein said integrated circuit is a display unit incorporated in one selected from a personal computer, a video camera, a mobile computer, a digital camera, a player for a recording medium, a goggle type display, a front type projector and a rear type projector.

39. A method for manufacturing an integrated circuit according to claim 31, wherein said integrated circuit is a display unit incorporated in one selected from a group consisting of a personal computer, a video camera, a mobile computer, a digital camera, a player for a recording medium, a goggle type display, a front type projector and a rear type projector.